



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

sprung. So she had passed from the House of Vamplew, without leaving even a stone among their illustrious dead.

I had all these details from time to time, in my interviews with Dr. Bleets who in his distraction, so far forgot ethics and professionalism as to discuss the case with me from every angle. Every day we'd thrash it out, at first in hope and confidence, then in doubt and disappointment, and finally in desperation. In spite of us, Baby Spen was slipping from our fingers, growing every minute more like a little tired flower, if one may say such a thing. If his mother had been plebian, she had certainly transmitted none of her characteristics; every atom of his small body was vibrant with breeding and refinement.

"It is strange he always seems to be so much weaker in the early part of the day," I said to Jenifer one morning, as the pair of us tried to rouse and coax him to take a few teaspoonfuls of milk, "most children are at their best during the hours before noon, and not so good later."

"Yes, Miss, it is strange," she agreed respectfully, "and he always sleeps good, too."

The last words were added with an emphasis which I attributed to Jenifer's desire to impress me with her thorough capability to care for little Spen at night, a fact I had never questioned.

(To be continued)

THE DEVELOPMENT OF THE X-RAY NEGATIVE

BY ROSE M. LORISH, R.N.

Pittsburgh, Pa.

I have been interested in articles appearing in the JOURNAL which are of a practical nature, and especially those which can be applied by the nurse who is doing Roentgenographic technician work.

What is the first step in the development of X-ray plates and films? Perhaps some will say the taking of the picture. This, of course, is very important, but as we are dealing with the development of the film and plate, we must begin with the developer and the apparatus used.

I have found the tray very much more convenient than the tank for developing purposes, although the tank is very convenient in the process of fixing. I have three trays, the largest being a size which accommodates the 14-inch by 17-inch and 11-inch by 14-inch plates. The next in size is used for 10-inch by 12-inch and 8-inch by 10-inch

plates and the smallest is used for 5-inch by 7-inch plates and dental films.

I have found my best success in compounding my own chemicals for the developer. One will find many formulae which can be used, and no doubt successfully, but I prefer the following, and I hope anyone who may care to use it will find it satisfactory:

A		B
Metol,	gr. 20	Potassium bromide, 10 gr.
Hydrocholin,	gr. 80	Carbonate of soda, 1 oz.
		Sulphite of soda, 1 oz.

Dissolve (A) in eight ounces and (B) in twelve ounces of cold water; when all dissolved, mix A and B together, and put in clean dark bottles, well corked, to keep the solution clean and also to prevent deterioration.

Have everything in readiness: a photographic dark room, a sink or tank with running water, large enough to give ample room for even our largest plate for washing, the tray of proper size, and the developer at a temperature of 65° F. Three-fourths of an inch of developer in the tray is a necessary amount.

Remove the plate from the red, then from the black envelope, with the film side upward; tilt the tray so that the fluid will be at one end; immerse one end of the plate in the fluid and let the other end down gently, lowering the tray quickly so that the fluid will spread over the entire plate. In this way we keep the plate developed evenly and prevent spotting. Care should be taken that the red light in the room does not shine directly on the film side of the plate before it is entirely covered with the developer, as this will often have the same effect as direct unshaded light. When developing, keep tilting the tray slowly from side to side, so as not to allow the developer to stand on any one spot for any length of time.

The amount of time required for developing depends upon: first, the time of exposure, (but we are taking for granted that the plates be developed the normal length of time); second, strength of developer; and third, the portion of the body which has been taken. For instance, if an arm plate has had the same amount of exposure as an abdominal plate, we would say the arm plate has been overexposed, and we must watch very carefully or the plate will be overdeveloped and cannot be read. For an abdominal plate that has been exposed for the same length of time, in from one-half to one minute the image will begin to appear. Keep developing until the opposite side becomes an opaque light gray in color. Another aid is to hold the plate in front of the red light and hold the hand on the opposite side from

that at which you are looking, if the fingers are not clearly visible, the plate is at about the proper shade for reading.

It must be emphasized that almost all plates differ in their development, therefore, "practice makes perfect."

The plate now developed must be placed in the tank or sink for washing and should be washed until it is entirely free from developer. If washed in the sink, it can now be placed in a frame ready for the fixing bath.

Regarding the fixing bath, I think most people who are accustomed to this work will agree that the "Chrome Alum Fixing Bath" will give the most satisfaction, as it has good keeping qualities, fixes clean, and remains clear after long continued use. The formula is as follows:

A		B	
Pure water,	96 oz.	Pure water,	32 oz.
Hypo,	2 lb.	Chrome alum,	2 oz.
Sulphite soda,	2 oz.	Sulphuric acid,	$\frac{1}{4}$ oz.

Mix chemicals in the order named. When dissolved, pour B into A slowly, while stirring A rapidly. If this mixture is not clear, it can be filtered into the tank.

It requires from five to ten minutes for plates or films to fix. When removed from the tank, if the entire film or plate is dark on the glass side, it is ready to be put into a bath of running water for one hour. When removed from the water, the plate should be smooth and clean, otherwise it has not been washed thoroughly. After washing, place on racks for drying.

If the tank method is used all the way through, more than one plate can be developed at one time. I have found that method rather confusing, as the plates cannot be watched so carefully, while in the developer, for their best definition, but it is preferred by some, and economizes time.